

NAVAL POSTGRADUATE SCHOOL

Monterey, California



An Assessment of Knowledge and Skill Requirements of Navy Shore-Based Installation Management

by

Christine B. Smith
Nancy C. Roberts
Gail Fann Thomas
Bruce Pawlowski

December 1996

Approved for public release; distribution is unlimited.

Prepared for: Office of the Assistant Secretary of the Navy
(Manpower and Reserve Affairs)
Washington, DC

DTIC QUALITY INSPECTED 3

19970205 051

NAVAL POSTGRADUATE SCHOOL
Monterey, California

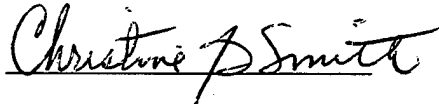
RADM M.J. Evans
Superintendent

Richard Elster
Provost

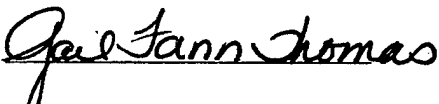
This report was prepared for and funded by the Office of the Assistant Secretary of the Navy,
(Manpower and Reserve Affairs), Washington, DC.

Reproduction of all or part of this report is authorized.

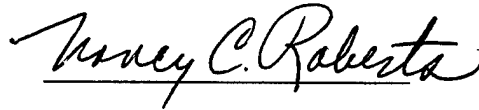
This report was prepared by:



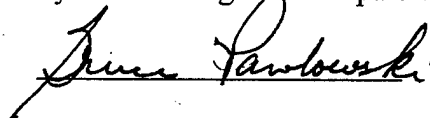
Christine B. Smith
Systems Management Department



Gail Fann Thomas
Systems Management Department

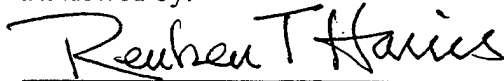


Nancy C. Roberts
Systems Management Department



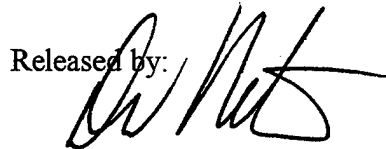
Bruce Pawlowski
Systems Management Department

Reviewed by:



Reuben T. Harris, Chairman
Systems Management Department

Released by:



David W. Netzer
Associate Provost and Dean of
Research

REPORT DOCUMENTATION PAGE

Form Approved

OMB No 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)

2. REPORT DATE

Dec 1996

3. REPORT TYPE AND DATES COVERED

Final Report

Oct 96 to Dec 96

1. TITLE AND SUBTITLE

An Assessment of Knowledge and Skill Requirements of Navy
Shore-Based Installation Management

5. FUNDING

DSAM60032

6. AUTHOR(S)

Christine B. Smith, Nancy C. Roberts,
Gail Fann Thomas, Bruce Pawlowski

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Department of Systems Management
Naval Postgraduate School
555 Dyer Rd.
Monterey, CA 93943-5000

8. PERFORMING ORGANIZATION
REPORT NUMBER

NPS-SM-96-004

2. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

Office of the Assistant Secretary of the Navy
(Manpower and Reserve Affairs)
Washington, DC.

10. SPONSORING/MONITORING
AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

Approved for public release; distribution unlimited.

12b. DISTRIBUTION CODE

3. ABSTRACT (Maximum 200 words.)

Two studies of the job demands of installation management are reported here. In Study 1, U.S. naval officers and civilians were interviewed regarding the knowledge and skill requirements of installation management. Seventeen "core" competency areas were extracted from these interviews and formed the basis of a survey administered to a sample of current installation commanding officers in Study 2. The survey focused on officers' perceptions of each area's importance and of their level of preparation in each area. The results of both studies strongly suggest naval installation commanders desire and require more extensive and specialized education and training in the competency areas prior to assuming command of an installation.

14. SUBJECT TERMS

15. NUMBER OF
PAGES

37

16. PRICE CODE

17. SECURITY
CLASSIFICATION
OF REPORT
UNCLASSIFIED

18. SECURITY
CLASSIFICATION
OF THIS PAGE
UNCLASSIFIED

19. SECURITY
CLASSIFICATION
OF ABSTRACT
UNCLASSIFIED

20. LIMITATION OF
ABSTRACT
SAR

NSN 7540-01-280-5800

DTIC QUALITY INSPECTED 3

Standard Form 298 (Rev. 2-89)

Prescribed by ANSI Std Z39-18

**An Assessment of Knowledge and Skill Requirements
of Navy Shore-Based Installation Management**

By

**Christine B. Smith
Nancy C. Roberts
Gail Fann Thomas
Bruce Pawlowski**

**Naval Postgraduate School
Department of Systems Management
Monterey, California**

December 1996

ACKNOWLEDGEMENTS

The research project reported here is based on a team effort that included other Naval Postgraduate School faculty in addition to the authors of this report. Bob Barrios-Choplin, Alice Crawford, Reuben Harris, and Sterling Sessions conducted field interviews and contributed to the development of the survey used to assess the skills and competencies required for Naval installation management.

ABSTRACT

Two studies of the job demands of installation management are reported here. In Study 1, U.S. naval officers and civilians were interviewed regarding the knowledge and skill requirements of installation management. Seventeen "core" competency areas were extracted from these interviews and formed the basis of a survey administered to a sample of current installation commanding officers in Study 2. The survey focused on officers' perceptions of each area's importance and of their level of preparation in each area. The results of both studies strongly suggest naval installation commanders desire and require more extensive and specialized education and training in the competency areas prior to assuming command of an installation.

INTRODUCTION

Background

There are over 400 military installations worldwide. With assets in excess of \$2.5 billion and an annual budget of roughly \$100 million, the typical naval installation provides services and facilities to about 12,000 sailors, family members, civilian employees, and retirees (ICIM, 1996a). Regardless of installation size, the provision of services and facilities occurs in an increasingly complex managerial environment. Budgetary belt-tightening, environmental regulations, outsourcing demands, and media scrutiny combine with a host of other factors to challenge the installation commanding officer's (CO) knowledge and skills. Despite the enormous fiscal responsibility and managerial challenges of operating a military installation, these officers receive little training prior to assuming command. According to the Installation Corporate Information Management Group (ICIM): "In no other major area, have OSD [Office of Secretary of Defense] and the Services and Agencies been so apathetic toward management and the preparation of managers" (1996a).

The ICIM was instituted by the Department of Defense (DoD) in an effort to identify, standardize, and streamline military installation services and to develop evaluation metrics for both services and facilities (ICIM, 1996b). Although it acknowledges the need for increased management training among existing and potential installation commanders, ICIM has not begun to explore the day-to-day knowledge and skill requirements of a military installation commander. That is the purpose of this research project.

In February 1996, Dr. Bernard Rostker, Assistant Secretary of the Navy for Manpower and Reserve Affairs, directed the Department of Systems Management at the Naval Postgraduate School (NPS) to assess the preparation required for base management in a complex and changing environment. This research examines the collective experiences of naval installation commanding officers to determine (a) the knowledge and skill areas (KSAs) pertaining to base/installation management, and (b) commanders' perceived level of preparation in those areas. Two research questions guided the project design:

RQ1: What knowledge and skill areas are critical for successful installation management?

RQ2: To what extent do installation commanders feel they are prepared in the critical knowledge and skill areas prior to assuming command?

Purpose

This report presents the results of two studies conducted by NPS faculty. Study 1 is a qualitative analysis of data gathered from semi-structured interviews of current and prior naval installation commanding officers and staff. Its intent is to explore the range of competencies required for successful installation management, and further, to begin to assess any "preparation gaps" in those competencies, as expressed by the officers themselves. The knowledge and skill competencies extracted in the analysis form the basis for a survey developed in Study 2. The survey addresses the relative importance of the core competencies and allows commanders to indicate their level of preparation in each competency area. Study 2 reports the survey results for current Navy installation commanding officers. A general discussion section for both Study 1 and Study 2 concludes the paper.

Study 1.

Sample

There are approximately 90 Navy installations in the continental U.S. (CONUS). In order to achieve a representative sample of the overall population of Navy installations in CONUS, those areas of CONUS with the highest concentration of Navy installations were specifically targeted for visits by NPS research teams. Table 1 shows the commands visited.

Table 1. Interview Sites

| Geographic Region | Command |
|--------------------------|--|
| Northeast | Portsmouth (NH) Naval Shipyard |
| Central Atlantic Coast | NSA Norfolk NavSta Norfolk Amphib. Base Little Creek Pentagon |
| Southeast | NAS Pensacola NAS Jacksonville NSA Jacksonville |
| Southwest | NavSta San Diego NSA San Diego NAS North Island Amphib. Base Coronado |
| Central Pacific Coast | Naval Postgraduate School |

Table 1. Interview Sites, cont.

| Geographic Region | Command |
|--------------------------|--|
| Northwest | NavSta Everett SubBase Bremerton NSA Bangor (WA) |

Within the areas of greatest concentration, 34 current or prior naval installation commanding, executive, and staff officers/civilians were selected and personally interviewed regarding their perceptions of the critical knowledge and skill areas required to run a military installation. Civilian and military staff included environmental liaisons, Morale, Welfare, and Recreation (MWR) and Public Works directors, housing officers, and legal officers. In one case, the interviewee (a current CO) assembled most of his staff for a brief question-answer period with the interviewers, but these staff members are not included in the total count because they were not individually interviewed. The sample consisted of

- 3 flag officers (1 CO),
- 10 current COs,
- 4 previous COs,
- 2 executive officers (XOs),
- 15 staff officers/civilians.

Method

Researchers from the Naval Postgraduate School conducted a series of progressively structured, face-to-face interviews. Working in pairs and triplets, portions of the research team arranged to visit officers at their current commands and, when schedules permitted, the team also arranged to interview staff and prior commanding officers in the vicinity.

Interviews consisted of primarily open-ended questions addressing officers' perceptions about critical competency areas in base management and the extent of their preparation in those areas. Our intent was to elicit as much information as possible from interviewees about their shore command preparation and experience without resorting to a tightly structured interview schedule which might limit responses or result in overlooking a unique but important competency area. To facilitate candid discussion, interviews were not tape-recorded, although researchers did take extensive notes on each officer's experience and perceptions. A progressively structured approach was adopted in which the officers were first asked to compare their shore command responsibilities to those of their previous assignments, which in many cases included mission command. As

the interview progressed, commanders were encouraged to expand on both the breadth and depth of competencies discussed, and to indicate the extent and quality of their formal preparation in those areas prior to assuming command. Finally, officers were asked about specific competencies not mentioned in order to assess whether their omission was due to oversight or perceived lack of importance.

Upon returning to NPS, individual researchers prepared reports that enumerated those knowledge and skill area competencies (KSAs) identified by their interviewees. Using inductive content analysis, the research team then collectively analyzed the interview reports to generate a list of common themes and items.

From these themes, the team generated a list of common KSAs. In order to be retained, a KSA had to be confirmed by two or more researchers using independent interviews as the basis for confirmation. The researchers then collapsed categorically related or semantically identical KSAs into one "umbrella" KSA. For example, under the rubric of "Financial Issues" are several related KSAs such as budget-balancing, reading financial statements, cost accounting, cost containment, understanding where funding originates, resource allocation, economic forecasting, retailing, and so on.

Results

Themes

Some notable trends and recurring themes surfaced from the interviews. One hundred percent of our interviewees brought up the importance of **financial matters**, and this usually occurred very early in each interview. Most officers felt they needed further preparation in this area. Some of the comments are illustrative:

[I] can't manage with the Navy accounting system: The purchase of desk chairs is lumped into the costs of running a tug-boat.

We need to know accounting for executives. What is gross, net, depreciation? What do I look for in an analysis? What is the fair market commercial rate? How much is a square foot?

The challenges have to do with budgets, dealing with diverse tenants and trying to provide good service.... We must do lots of analysis to figure tradeoffs of spending on some things as compared to others.

Staffing also surfaced as a critical issue. Interviewees stressed the need for fully qualified staff. Particularly well-regarded were the civilian staff (e.g., environmental, legal) who were experts in their field and not subject to rotation every two to three years. Such reliance on civilian continuity does not come without costs, however. As one officer observed, *"Three year turnovers place the institutional memory in the hand of*

the civilian bureaucracy.” Still, a good staff is vital, but useful only if one has *“a working knowledge to understand the principles and basic concepts to ask intelligent questions.”*

There was complete agreement on the issue of **civilian personnel management**. *“Fifty percent of what a CO does is a personnel type of decision,”* said one respondent, noting that he was not particularly well-prepared for the challenge. Another officer confirmed that his operational experience left him ill-prepared for dealing with civilians: *“the biggest transition for me was civilian personnel. My only previous experience was in a shipyard even though I had been in the Navy for 17 years.”* According to one interviewee, managing civilian personnel is the number one challenge for both the CO and the XO: *“Personnel management from the military side is not a problem because we have the tools. From the civilian point of view, we don’t have the tools.”* Even the familiar Morale, Recreation, and Welfare (MWR) department seems daunting from the new shore commander’s point of view. One officer observed that a colleague’s *“biggest challenge was the Child Development Center – he owned it. His biggest fear was child abuse.”*

Many of the problems associated with critical KSAs like personnel issues arise from **making the transition** from air and sea command to shore command, or from operations-based assignments to installation management. For example, many officers cited steep learning curves for legal and environmental issues and responsibilities, tenant and facilities management, outsourcing and contracting. *“It takes a long time to figure out what is a priority and what isn’t,”* said one officer. *“After about two years, you finally know what to pay attention to, then you have one more year do it and you have learned from the problems of the past two years,”* commented another. Consequently, the solution for many was to merely observe and learn rather than attempt to manage from a position of ignorance. As one CO stated, *“The first 6 - 9 months I just stayed out of the way and tried not to be an obstacle.”* This was a common strategy, especially among those officers who discovered their operational training and experience did not adequately prepare them for macro-level management. This *“on-the-job training,”* from the CO on down to the S-1 (admin) desk clerk, *“perpetuated inefficiencies”* and *“preserved the status quo,”* observed one CO. Furthermore, it promoted reactive, rather than proactive management. Another agreed with this assessment and offered the following example:

You learn so much from experience. For example, an oil spill is moved by tide over to Coronado and all the ducks die. That’s not the time to get the call. You need to put into place preventive procedures, etc., but you seem to have to learn from accidents.

Reactive management not only has the potential to undermine the CO’s credibility, but it also could place **base-community relations** at risk. Many COs cited the strategic nature of developing, maintaining, and enhancing those relations. A key concern, according to one officer, was finding *“innovative ways of partnering with the*

community.” Particularly problematic for the new CO was recognizing the status of the current base-community relationship and finding metrics for evaluating those relationships. Others found their installations in a “state of siege” by communities more interested in getting rid of them than partnering. They wanted help in overcoming these negative relations. A healthy relationship between base and community *“makes things a lot easier,”* said one CO.

An issue frequently mentioned was the commanding officer’s presence as a **leader in the community**. As one stated, *“from the mayor and the city council on down they all want to talk with ‘the man’ [base CO].”* This requirement puts enormous time demands on the CO. *“A typical day consists of 6 - 9 scheduled events,”* observed one officer, and *“most don’t understand how much time is consumed...”* *“The average day is twelve hours,”* said another. In keeping with the CO’s high-visibility role, several officers noted the need for explicit training in dealing with media, and especially crisis management. As one stated, *“the media is one of my greatest concerns.”* Another described his frustration because he *“had no previous exposure to public affairs,”* and then he had to contend with *“irresponsible reporting by the media.”* More than one officer suggested that training involving role-playing techniques would be helpful in dealing with high media visibility. Another wanted additional staff to contend with the media: *“We have a \$300 million business with demanding capabilities in managing the media and I have a [public affairs staff of 2] compared to the Lockheeds of the world.”*

A number of officers expressed concerns about managing and using new **communication technology**. These concerns ranged from an outright plea for hands-on computer instruction (*“There’s no training for using technology”*) to larger systemic concerns, such as the technological disparity, in terms of both training and resources, among installations (*“I have people in 25 buildings and can’t talk to them with a computer”*). The current national emphasis on using communication technology to facilitate learning and distributed work serves to underscore what they see as a serious lack of skills and resources at the management level in Navy base operations.

In commenting on their larger role, officers tended to characterize running an installation as similar to running a city or town, with caveats like **“there’s always the mission to consider,”** and **“no city manager owns a grocery store, gas station, bowling alley, and day care center.”** One officer described the CO/XO positions: *“Our jobs are like being mayor and vice mayor. We provide good service and deal with egos without pissing people off.”* Running a Navy base, however, is **not** like running a ship, sub, or squadron. One officer made the distinction that the *“shipboard environment is very structured”* compared to the shore environment. Another offered more detail. Running an installation, he said,

... is the most difficult management position in the Navy. The skipper of a carrier has one main objective: to get underway on time, every time and safely.

Everyone does what the CO tells them; they are all focused on the bridge, and the tasks they do are routine. The CO of a shore command has multiple objectives. On base, every day is different.

One CO observed that shore commanders have different approaches, even different philosophies, toward shore command, and that this is largely contingent on the officer's training and experience:

There are two types of base commanders. Some see the command as mayor of a city. Cocktail parties, gladhanding, etc.. They may have a broad overview but they don't understand anything. The other is the city manager who clearly understands how to run a city.

All commanding officers attended the Prospective CO School (PCO), a three-week-long intensive overview of the responsibilities of shore command. Some likened it to a "firehose" in terms of breadth and depth of information in a short period of time. Others felt it provided a good overview of what to expect. Some people with prior preparation (e.g., XO experience or managerial/administrative education) said they felt they got more out of the PCO course because of their prior preparation. While the officers we interviewed both praised and condemned the PCO School, they generally agreed that it was insufficient preparation for the realities of modern base management.

A final theme from the installation COs was their sense of being "*second-class*." They felt they did not receive the pay, training, and support commensurate with the responsibilities of the job. For example, base commanders do not receive the Command Responsibility Pay (CRP) that ship and air wing commanders get, even though the base CO's "*management scope is tenfold compared to theirs*," said one CO. The pay discrepancy may, in part, account for the perception that "*even though the level of responsibility is much greater than it is for war fighters, it's not recognized as such*," said another. "*They think it's easy!*" one officer commented, noting that "*the same logic applied to ship drivers and aviators (i.e., lots of training) is not applied to base commanders*."

KSAs

Seventeen knowledge and skill areas considered "basic" to Navy installation management were extracted from the interview data: **Finance, Management Information Systems, CIVPERS, Environmental Regs, Legal Matters, Facilities Management, Materiel Management, Media Relations, Community Relations, Contracting & Outsourcing, Leadership, Managing Change, Organizational Redesign, Strategic Planning, Urban Planning, Performance Evaluation, and MWR.** These KSAs are described below, including some of the specific skill and knowledge requirements which comprise the larger core categories.

The knowledge and skill requirements comprising the **Finance** KSA run the gamut of purely "business" skills relating to better service delivery and informed decision-making, to purely "Navy" skills relating to resource origination and allocation. For example, most officers indicated they spend a substantial portion of their time reading and trying to understand the various financial reports generated for the purposes of both monitoring installation activities and making resource allocation decisions. Key to their understanding, aside from a thorough grounding in traditional corporate accounting and financial procedures, was an adequate picture of the "Navy's way" of generating base operating funds and the restrictions on use of those funds.

The **Management Information Systems** KSA reflects managing both information and the new technologies for doing so. Skills include obtaining and prioritizing information for decision-making; maintaining information networks among staff, colleagues, and higher-level commands; monitoring new developments in technology and assessing their desirability; and simply, how to use new computer technologies such as e-mail, teleconferencing, and graphic presentation programs.

The issue of **Civilian Personnel** elicited a "wish list" of desired knowledge, primarily because most new installation COs have little experience dealing with civilian employees. Included in this list are labor and contract negotiations; employee recruitment, evaluation, training, and discipline.

While most interviewees agreed that a top-notch staff was the critical element in coping with **Environmental Issues**, they also expressed the need to better anticipate issues that may arise during their tenure. Additionally, they require a full understanding of the impact of regulatory compliance (and non-compliance) on base operations. More specifically, they need to be aware of both local and state-level regulations pertaining to their locale and operations.

Much like environmental issues, **Legal Matters** require understanding of both local and higher-level jurisdictions and processes which may impact base operations and personnel. The CO does not require exhaustive legal knowledge, but does require a working knowledge of jurisdictional boundaries as well as an awareness of potential conflicts of interest and their legal implications.

For **Facilities Management**, the installation CO does not require detailed knowledge of the workings of the physical plant and its maintenance; however, several respondents indicated they do need some background in reading "specs" and in construction funding processes.

Materiel Management, much like Facilities Management, does not entail detailed knowledge of the workings of machinery or supply of durable and non-durable

goods. Instead, the CO requires a broad-brush overview of cost management and supply logistics in order to effectively monitor base operations.

The area of **Media Relations** tapped a well of uncertainty among interviewees. While almost none of the officers interviewed had been tested by a "hostile media" incident, most were concerned about that eventuality and their lack of coping skills. Several had experienced inadequate or inaccurate reporting, generally viewed the local press as adversarial, and desired strategies for taking a more proactive stance with the media. The other primary skill required in this area is public speaking.

Community Relations deals with enhancing a positive relationship or overcoming a negative image in the community. The interviewees stressed an ongoing need to find new ways to interact positively with local government and community agencies such as law enforcement and education, as well as with the public at large, without compromising the mission or base operations. This area is closely related to Legal Matters, as the CO must avoid conflicts of interest in accepting invitations to participate in the activities of public-interest groups, or in issuing invitations to use government facilities for such activities.

Knowledge of **Contracting and Outsourcing** processes and procedures, for example bidding and negotiating, has become imperative at the local (installation) level. Installation operations are increasingly outsourced to independent and civilian contractors in an effort to reduce infrastructure costs. A deeper understanding facilitates the commander's role as partner in this process, and potentially safeguards the government against allegations of abuse.

Running a Navy installation often requires new **Leadership** skills, or at least new variations of existing skills. These include interpersonal skills such as motivating and persuading, resolving conflicts, facilitating meetings and understanding group dynamics, listening, and communicating orally and in writing.

While treated as separate areas, **Managing Change** and **Strategic Planning** are closely allied. The need for change is sometimes imposed from without, and sometimes identified from within. Both require transition planning and close monitoring of impacts on the mission, operations, and personnel. Successful strategic planning often anticipates change, and also includes monitoring the environment and planning for future needs. Skills such as model testing, forecasting, and decision-making are particularly useful in this area.

Operating a Navy base in a climate of change and complexity often calls for **Organizational Redesign**. An effective manager is able to rearrange people, tasks, structure, and processes as necessary to meet base objectives. This entails flexibility and

a broad understanding of the essential elements interacting in the operation of the organization.

Urban Planning is optimizing land use within the constraints of government regulations at all levels. Many installations are in periods of extensive growth in terms of new facilities or reuse of old ones. The installation commander often plays a decisive role in base use and reconfiguration.

Several interviewees cited the need for improved metrics and standards for **Performance Evaluation**. Furthermore, some gave evidence of developing and implementing their own metrics, implying that this was a useful skill for monitoring operations and targeting areas of needed change.

Finally, there is no area so heavily "business-oriented" as **MWR**, nor, with the exception of mission support, one so "service-oriented." Required here is understanding of basic business practices (e.g., profit and loss) and resource generation used in programs and services provided for the morale and welfare of the base population.

Summary

A broad body of core competencies required for base management emerged from Study 1. Quite literally, the installation CO is viewed as a leader, a landlord, a city manager, a mayor, a media figure, and CEO of a business rivaling some of the world's largest corporate entities in size and budget. Furthermore, the majority of officers we spoke with were dissatisfied with the extent of training and preparation offered for such a complex job, one in which they are highly visible and bear a significant amount of personal liability.

While there were some indications of varying degrees of importance attached to the specific KSAs, **none of the KSAs reported were regarded as unimportant by our sample**. In order to gauge the relative importance of the competencies, and to further validate the perceived "knowledge gap" of commanding officers, we decided to develop a survey based on these results and administer it to the current population of CONUS Navy base commanders. This effort is reported in Study 2.

Study 2.

Seventeen knowledge and skill areas (KSAs) considered critical to successful installation management were extracted from interviews conducted in Study 1, along with strong indications that (in retrospect) better preparation would have enabled the commanding officers (COs) to achieve their expected and desired level of effectiveness and efficiency in a shorter amount of time. The KSAs are **Finance; Management Information Systems; Civilian Personnel; Environmental; Legal; Facilities Management; Materiel Management; Media Relations; Community Relations; Contracting; Leadership; Change Management; Organizational Redesign; Strategic Planning; Urban Planning; Performance Evaluation; and MWR**, as reported in Study 1.

Method

A survey was developed in which respondents were asked to rate the importance of the 17 KSAs as well as their perceived degree of preparation prior to assuming command. The following scales were used, respectively:

| IMPORTANCE | | | | PREPARATION | | | |
|------------|-----------|-----------|-----------|-------------|----------|----------|----------|
| Very | | Somewhat | Not | Well | | Somewhat | Not |
| Important | Important | Important | Important | Prepared | Prepared | Prepared | Prepared |
| 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |

Respondents were also asked to provide a copy of their professional biography which was used to determine what, if any, advanced degrees were held, along with rank if it was not clear from the survey. Primary MOS designators (P codes/designators) were obtained for all respondents using NAVPERS 15018D (the 1993 "Blue Book;" the 1100 designator has since been changed to 1700). Installation size was obtained from a N-46 listing of all Navy installations (descriptors were small, medium, large, and admin.). Mission type was self-reported by respondents. Categories were air, sub, surface, weapons, training, and other (which included "all," admin., R&D, shipyards, etc.).

The Sample

Surveys were sent to current Navy installation COs in the continental U.S. (CONUS), Alaska and Hawaii (N=66). A total of 38 completed surveys were returned for an initial response rate of 59 percent. One survey was unusable, so its elimination reduced the return rate to 56 percent. Although we had hoped for 100 percent participation, the sample obtained is representative of the current population of CONUS Navy base COs. The primary U.S. geographic regions were represented, as were mission types and installation size. Sample distributions are shown in figures 1-3.

Figure 1. Sample Distribution by Geographic Region

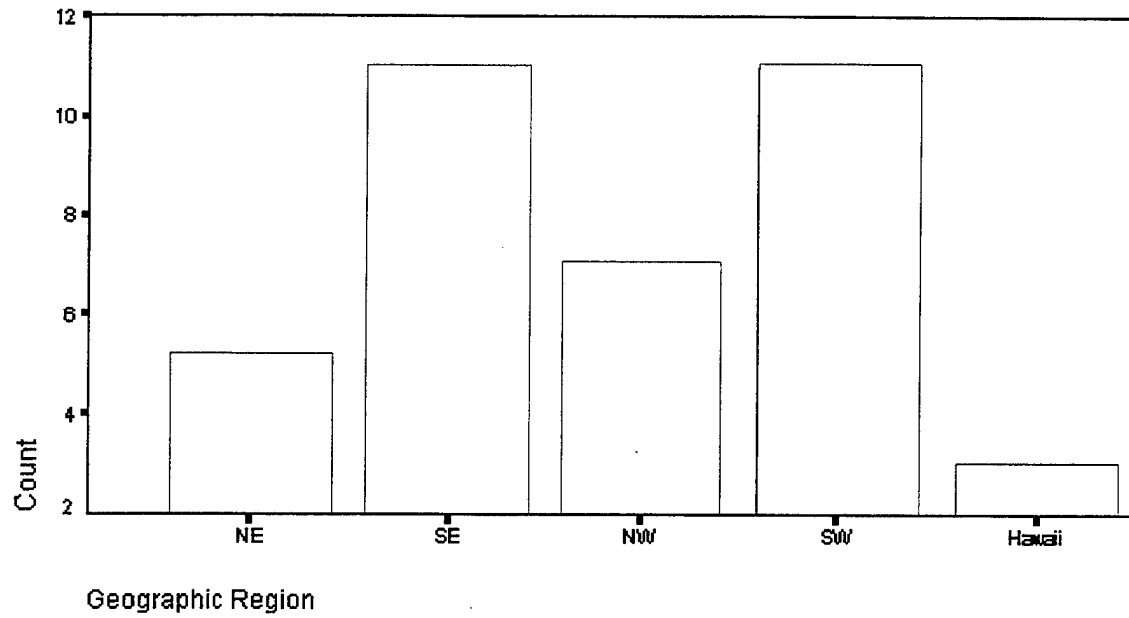
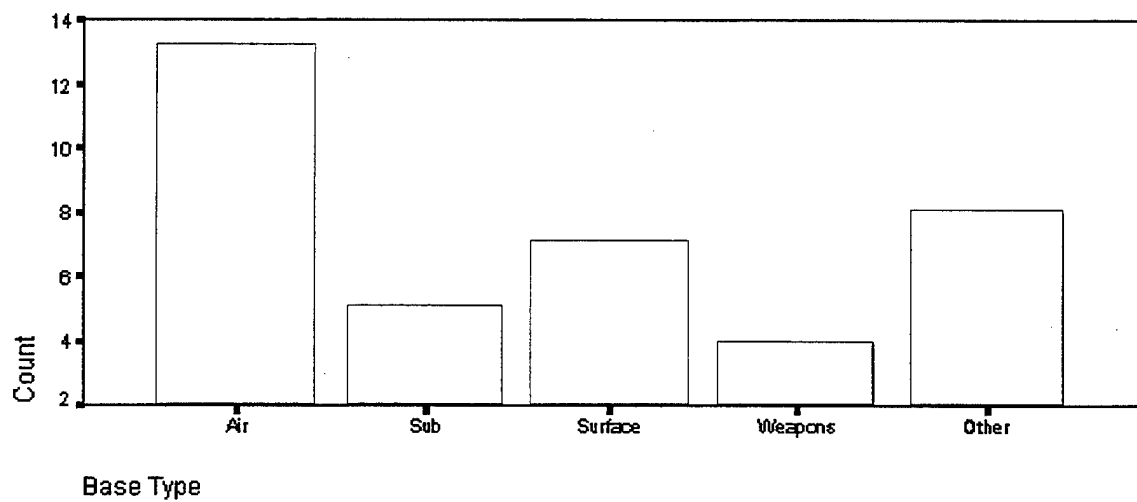
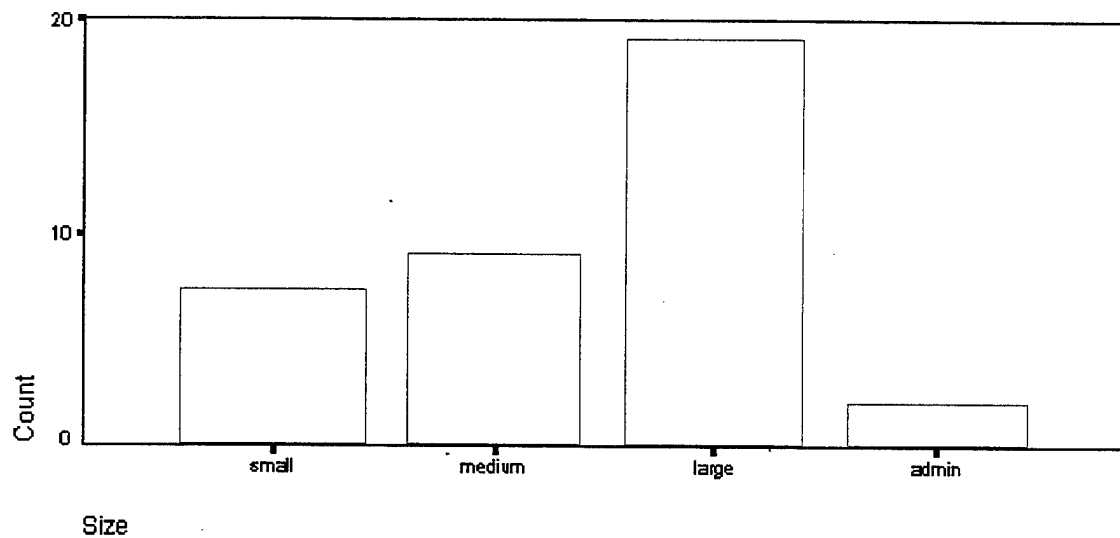


Figure 2. Sample Distribution by Mission Type



*'Other' category: admin, training, shipworks, etc.
as well as 'all,' which may include sub, air, surface

Figure 3. Sample Distribution by Base Size



Source: N-46 List

Respondent's ranks were distributed as follows: Commander (05; n=2); Captain (06; n=32); Rear Admiral (07; n=3). The sample was extremely well-educated, with almost two-thirds of the respondents holding post-graduate degrees in areas ranging from physics and engineering to business, management, and public administration. COs' biographies which did not report advanced degrees still indicated a high level of continuing education in tactical and subspecialty areas.

Results

Relative Rankings of KSAs

The importance ratings of KSAs ranged from a mean of 2.73 to a mean of 3.97 (on a scale of 1 to 5, with 1 being lowest in importance and 5 being highest), indicating that all KSAs were perceived to be somewhat important to very important. The overall trend was to rate each KSA "very important." With the exception of Materiel Management (mean importance = 2.92) and Urban Planning (mean importance = 2.73), all KSAs were regarded as very important competencies for installation management. The top five KSAs, in terms of mean *importance* ratings, are Leadership, Community Relations, Civilian Personnel, Environmental, and Strategic Planning.

Preparation ratings ranged from a mean of 2.11 to a mean of 3.68, indicating that commanding officers perceived themselves to be somewhat prepared to prepared. With the exception of Leadership (mean= 3.68) and Media Relations (mean= 3.00) **all preparation ratings fell between "somewhat prepared" and "prepared."** The five KSAs rated lowest, in terms of mean *preparation* ratings, are Urban Planning,

Contracting, MWR, Finance, and Civilian Personnel. The mean ratings of all KSAs are given in Tables 2 and 3.

Table 2. Mean Ratings of KSAs in Order of Importance (highest to lowest)

| KSA | Mean | Min. | Max. | N = 37 |
|---------------------|------|------|------|--------|
| Leadership | 3.97 | 3 | 4 | |
| Community Relations | 3.73 | 2 | 4 | |
| Civilian Personnel | 3.62 | 3 | 4 | |
| Environmental | 3.62 | 2 | 4 | |
| Strategic Planning | 3.59 | 2 | 4 | |
| Change Mgt. | 3.57 | 3 | 4 | |
| Media Relations | 3.54 | 1 | 4 | |
| Finance | 3.49 | 2 | 4 | |
| MWR | 3.35 | 1 | 4 | |
| Facilities Mgt | 3.35 | 2 | 4 | |
| Org. Redesign | 3.30 | 2 | 4 | |
| Contracting | 3.27 | 2 | 4 | |
| Legal | 3.24 | 2 | 4 | |
| Perform Evaluation | 3.16 | 1 | 4 | |
| Mgt Info Systems | 3.14 | 2 | 4 | |
| Materiel Mgt | 2.92 | 2 | 4 | |
| Urban Planning | 2.73 | 1 | 4 | |

Scale: 1 = not important 5 = very important

Table 3. Mean Ratings of KSAs in Order of Preparation (lowest to highest)

| KSA | Mean | Min. | Max. | N = 37 |
|---------------------|------|------|------|--------|
| Urban Planning | 2.11 | 1 | 4 | |
| Contracting | 2.14 | 1 | 4 | |
| MWR | 2.32 | 1 | 4 | |
| Finance | 2.38 | 1 | 4 | |
| Civilian Personnel | 2.38 | 1 | 4 | |
| Mgt Info Systems | 2.41 | 1 | 4 | |
| Perform Evaluation | 2.46 | 1 | 4 | |
| Environmental | 2.49 | 1 | 4 | |
| Facilities Mgt | 2.62 | 2 | 4 | |
| Legal | 2.76 | 1 | 4 | |
| Materiel Mgt | 2.84 | 1 | 4 | |
| Org. Redesign | 2.84 | 1 | 4 | |
| Change Mgt. | 2.92 | 1 | 4 | |
| Strategic Planning | 2.97 | 1 | 4 | |
| Community Relations | 2.97 | 1 | 4 | |
| Media Relations | 3.00 | 1 | 4 | |
| Leadership | 3.68 | 1 | 4 | |

Scale: 1 = not prepared 5 = very prepared

Knowledge Gaps

Despite the experienced and highly-educated status of our sample, significant self-reported knowledge gaps were identified. Almost without exception, **the importance ratings exceeded the preparation ratings to a statistically significant degree** (the sole exception was Materiel Mgt.¹). For example, officers rated Civilian Personnel as very important with a mean rating of 3.62, yet indicated they were only somewhat prepared in this area with a mean of 2.38, yielding a mean difference of 1.24 ($t=6.93$, $p=.00$). As the pairwise comparisons in Table 4 indicate, the largest preparation gaps occurred in the following areas: **Civilian Personnel** (diff= 1.24), **Environmental Issues and Contracting** (diff=1.14), **Finance** (diff=1.1), and **MWR** (diff=1.03).

Table 4. Differences in KSA Importance and Preparation Ratings

| KSA | Mean | diff. (gap) | sd | t value | df | p |
|---------------------------|---------------------------------------|----------------|------|------------|----|------|
| Finance/Accounting/Budget | Importance: 3.49 Preparation: 2.38 | 1.1 | 1.02 | 6.60 | 36 | .000 |
| Mgmt Information Systems | Importance: 3.14 Preparation: 2.41 | .73 | 1.05 | 4.25 | 36 | .000 |
| Civilian Personnel Issues | Importance: 3.62 Preparation: 2.38 | 1.24 | 1.09 | 6.93 | 36 | .000 |
| Environmental Issues | Importance: 3.62 Preparation: 2.49 | 1.14 | 1.00 | 6.87 | 36 | .000 |
| Legal Issues | Importance: 3.24 Preparation: 2.76 | .49 | 1.02 | 2.91 | 36 | .006 |
| Facilities Mgmt | Importance: 3.35 Preparation: 2.62 | .73 | .87 | 5.10 | 36 | .000 |

¹This exception may be partly due to the brevity of KSA descriptions in the survey (a copy of the survey instrument is appended). Taken strictly at face value, the necessarily brief description of Materiel Management may have resulted in a failure to perceive its direct or potential relevance to installation management. For example, Materiel Management (Mean importance = 2.92), described as "maintaining equipment and monitoring its life-cycle," may have been interpreted as more of an operational skill than a managerial one by survey respondents.

Table 4. Differences in KSA Importance and Preparation Ratings, cont.

| KSA | Mean | diff. (gap) | sd | t value | df | p |
|-------------------------|---------------------------------------|------------------------|-----------|--------------------|-----------|----------|
| Materiel Mgmt | Importance: 2.92 Preparation: 2.84 | .08 | 1.01 | .49 | 36 | .628 |
| Media Relations | Importance: 3.54 Preparation: 3.00 | .54 | 1.04 | 3.15 | 36 | .003 |
| Community Relations | Importance: 3.73 Preparation: 2.97 | .76 | .96 | 4.82 | 36 | .000 |
| Contracting | Importance: 3.27 Preparation: 2.14 | 1.14 | 1.34 | 5.17 | 36 | .000 |
| Leadership | Importance: 3.97 Preparation: 3.68 | .30 | .70 | 2.58 | 36 | .014 |
| Change Mgmt | Importance: 3.56 Preparation: 2.92 | .65 | 1.03 | 3.82 | 36 | .001 |
| Organizational Redesign | Importance: 3.30 Preparation: 2.84 | .46 | 1.15 | 2.44 | 36 | .020 |
| Strategic Planning | Importance: 3.59 Preparation: 2.97 | .62 | 1.1 | 3.47 | 36 | .001 |
| Urban Planning | Importance: 2.73 Preparation: 2.11 | .62 | 1.01 | 3.74 | 36 | .001 |
| Performance Evaluation | Importance: 3.16 Preparation: 2.46 | .70 | 1.15 | 3.71 | 36 | .001 |
| MWR Issues | Importance: 3.35 Preparation: 2.32 | 1.03 | 1.17 | 5.36 | 36 | .000 |

Note: results rounded to nearest 100th

Discussion

Differences According to Sample Subgroups

Having established the importance of the 17 KSAs, the remaining analyses focused on respondents' preparation ratings and factors which might account for differences in

ratings, either overall, or in specific KSAs. The sample was divided according to geographic region, base size (N-46 categories), mission type (e.g., air, sub, training, etc.), officer type (P codes), rank, and education (classified as “management”, “non-management”, or “unknown” according to biographical information provided by respondents). Because the absence of advanced degree information in a person’s professional biography does not necessarily confirm the lack of post-graduate work or degrees earned, those whose biographies lacked such information were categorized as “unknown.” The sample consisted of 11 officers with management Master’s degrees, 12 with non-management degrees, and 14 individuals for which advanced degree attainment was unknown. Means for all KSA ratings by variable groups are reported in Table 5.

Table 5. Mean Preparation Ratings for All KSAs by Sample Sub-groups

| KSA | Region | Size | Mission | P Code | Rank | Edu. |
|--------------------|---|--|--|--|-------------------------------|--------------------------------------|
| Finance | NE: 2.0 SE: 2.3 NW: 1.9 SW: 2.9 HI: 2.7 | Sm: 2.3 Med: 2.6 Lg: 2.4 Admin: 1.5 | Air: 2.3 Sub: 2.4 Surface: 2.5 Weapons: 2.0 Other: 2.5 | 1700: 2.0 11xx: 2.4 12xx: 2.5 13xx: 2.3 other: 3.0 | 05: 2.5 06: 2.4 07: 1.7 | Mgt: 2.5 Non Mgt: 2.8 Unk: 2.0 |
| MIS | NE: 2.6 SE: 2.4 NW: 2.2 SW: 2.6 HI: 2.0 | Sm: 2.7 Med: 2.2 Lg: 2.4 Admin: 2.5 | Air: 2.1 Sub: 2.4 Surface: 2.6 Weapons: 2.3 Other: 2.9 | 1700: 2.3 11xx: 2.4 12xx: 3.0 13xx: 2.2 other: 2.7 | 05: 3.5 06: 2.4 07: 2.0 | Mgt: 2.6 Non Mgt: 2.6 Unk: 2.1 |
| CIVPER | NE: 1.8 SE: 2.3 NW: 2.3 SW: 2.5 HI: 3.3 | Sm: 2.4 Med: 2.9 Lg: 2.3 Admin: 1.0 | Air: 2.0 Sub: 2.8 Surface: 2.7 Weapons: 2.3 Other: 2.5 | 1700: 3.0 11xx: 2.3 12xx: 2.8 13xx: 1.9 other: 3.7 | 05: 2.0 06: 2.4 07: 2.0 | Mgt: 2.5 Non Mgt: 2.8 Unk: 1.9 |
| Environment | NE: 2.0 SE: 2.6 NW: 2.7 SW: 2.4 HI: 2.7 | Sm: 2.1 Med: 3.0 Lg: 2.4 Admin: 2.0 | Air: 2.2 Sub: 2.8 Surface: 2.7 Weapons: 2.0 Other: 2.8 | 1700: 2.0 11xx: 2.7 12xx: 2.8 13xx: 2.2 other: 3.0 | 05: 2.5 06: 2.5 07: 2.0 | Mgt: 2.5 Non Mgt: 2.8 Unk: 2.3 |
| Legal | NE: 3.0 SE: 2.5 NW: 2.9 SW: 2.7 HI: 3.0 | Sm: 2.9 Med: 3.0 Lg: 2.7 Admin: 3.5 | Air: 2.7 Sub: 2.8 Surface: 2.7 Weapons: 2.5 Other: 3.0 | 1700: 2.0 11xx: 3.1 12xx: 3.0 13xx: 2.6 other: 2.3 | 05: 2.0 06: 2.8 07: 3.3 | Mgt: 2.8 Non Mgt: 2.7 Unk: 2.8 |

Table 5. Mean Preparation Ratings for All KSAs by Sample Sub-groups cont.

| KSA | Region | Size | Mission | P Code | Rank | Edu. |
|-----------------------|---|--|--|--|-------------------------------|--------------------------------------|
| Facilities Mgt | NE: 2.2 SE: 2.6 NW: 2.6 SW: 2.6 HI: 3.7 | Sm: 2.4 Med: 2.6 Lg: 2.8 Admin: 2.0 | Air: 2.5 Sub: 2.8 Surface: 3.1 Weapons: 2.5 Other: 2.4 | 1700: 2.3 11xx: 2.8 12xx: 2.3 13xx: 2.4 other: 3.7 | 05: 2.0 06: 2.7 07: 2.3 | Mgt: 2.9 Non Mgt: 2.7 Unk: 2.4 |
| Materiel Mgt | NE: 2.6 SE: 2.5 NW: 2.4 SW: 3.4 HI: 3.7 | Sm: 2.9 Med: 2.8 Lg: 2.9 Admin: 2.5 | Air: 2.5 Sub: 3.2 Surface: 3.0 Weapons: 3.3 Other: 2.9 | 1700: 1.7 11xx: 3.2 12xx: 3.0 13xx: 2.4 other: 4.0 | 05: 2.5 06: 2.9 07: 2.3 | Mgt: 3.0 Non Mgt: 2.9 Unk: 2.6 |
| Media | NE: 3.0 SE: 3.1 NW: 2.9 SW: 3.1 HI: 2.7 | Sm: 2.7 Med: 3.2 Lg: 2.9 Admin: 3.5 | Air: 3.0 Sub: 2.6 Surface: 3.3 Weapons: 2.5 Other: 3.3 | 1700: 2.7 11xx: 3.1 12xx: 3.3 13xx: 2.9 other: 3.0 | 05: 2.0 06: 3.0 07: 3.7 | Mgt: 3.0 Non Mgt: 3.0 Unk: 3.0 |
| Comm Relat | NE: 3.0 SE: 3.0 NW: 3.1 SW: 3.0 HI: 2.3 | Sm: 2.6 Med: 3.0 Lg: 3.1 Admin: 3.5 | Air: 2.9 Sub: 2.8 Surface: 2.9 Weapons: 2.5 Other: 3.5 | 1700: 2.3 11xx: 3.1 12xx: 3.0 13xx: 2.9 other: 3.7 | 05: 3.0 06: 2.9 07: 3.7 | Mgt: 2.5 Non Mgt: 3.3 Unk: 3.0 |
| Contracting | NE: 1.4 SE: 1.8 NW: 2.3 SW: 2.5 HI: 2.7 | Sm: 2.1 Med: 2.3 Lg: 2.1 Admin: 1.5 | Air: 1.8 Sub: 2.2 Surface: 2.6 Weapons: 2.0 Other: 2.4 | 1700: 2.0 11xx: 2.2 12xx: 2.8 13xx: 1.6 other: 3.7 | 05: 2.0 06: 2.2 07: 1.7 | Mgt: 2.2 Non Mgt: 2.5 Unk: 1.8 |
| Leadership | NE: 3.4 SE: 3.5 NW: 3.7 SW: 3.9 HI: 4.0 | Sm: 3.7 Med: 3.6 Lg: 3.7 Admin: 3.5 | Air: 3.6 Sub: 3.4 Surface: 3.9 Weapons: 4.0 Other: 3.6 | 1700: 3.3 11xx: 3.8 12xx: 4.0 13xx: 3.5 other: 4.0 | 05: 3.5 06: 3.7 07: 3.3 | Mgt: 3.8 Non Mgt: 3.6 Unk: 3.6 |
| Change Mgt | NE: 3.2 SE: 2.7 NW: 2.7 SW: 3.1 HI: 3.0 | Sm: 2.7 Med: 2.4 Lg: 3.2 Admin: 3.5 | Air: 2.8 Sub: 3.2 Surface: 3.3 Weapons: 2.5 Other: 2.9 | 1700: 2.0 11xx: 3.2 12xx: 2.8 13xx: 2.8 other: 3.7 | 05: 2.0 06: 3.0 07: 2.7 | Mgt: 3.2 Non Mgt: 2.6 Unk: 3.0 |

Table 5. Mean Preparation Ratings for All KSAs by Sample Sub-groups cont

| KSA | Region | Size | Mission | P Code | Rank | Edu. |
|---------------------------|---|--|--|--|-------------------------------|--------------------------------------|
| Org. Redesign | NE: 2.6 SE: 2.8 NW: 2.3 SW: 3.2 HI: 3.3 | Sm: 3.0 Med: 2.6 Lg: 2.8 Admin: 3.5 | Air: 2.6 Sub: 3.0 Surface: 3.0 Weapons: 2.8 Other: 3.0 | 1700: 1.7 11xx: 3.1 12xx: 3.3 13xx: 2.6 other: 3.7 | 05: 2.0 06: 2.9 07: 3.0 | Mgt: 2.7 Non Mgt: 2.7 Unk: 3.0 |
| Strategic Planning | NE: 3.0 SE: 2.5 NW: 2.7 SW: 3.4 HI: 3.7 | Sm: 3.3 Med: 2.6 Lg: 3.0 Admin: 3.5 | Air: 2.8 Sub: 3.0 Surface: 2.9 Weapons: 3.5 Other: 3.1 | 1700: 1.7 11xx: 3.3 12xx: 3.3 13xx: 2.6 other: 4.0 | 05: 3.0 06: 3.0 07: 3.0 | Mgt: 2.9 Non Mgt: 2.8 Unk: 3.1 |
| Urban Planning | NE: 2.2 SE: 2.1 NW: 1.9 SW: 2.1 HI: 2.7 | Sm: 2.0 Med: 1.8 Lg: 2.3 Admin: 2.0 | Air: 2.0 Sub: 2.4 Surface: 2.6 Weapons: 2.0 Other: 1.8 | 1700: 1.3 11xx: 2.4 12xx: 1.5 13xx: 2.0 other: 3.0 | 05: 2.5 06: 2.1 07: 1.7 | Mgt: 2.4 Non Mgt: 2.3 Unk: 1.8 |
| Perform. Eval. | NE: 1.8 SE: 2.5 NW: 2.1 SW: 2.6 HI: 3.3 | Sm: 2.7 Med: 2.0 Lg: 2.6 Admin: 2.0 | Air: 2.3 Sub: 2.8 Surface: 2.7 Weapons: 2.3 Other: 2.4 | 1700: 2.3 11xx: 2.6 12xx: 2.5 13xx: 2.2 other: 3.0 | 05: 3.0 06: 2.5 07: 2.0 | Mgt: 2.5 Non Mgt: 2.5 Unk: 2.4 |
| MWR | NE: 1.6 SE: 2.6 NW: 2.0 SW: 2.4 HI: 3.0 | Sm: 2.6 Med: 2.0 Lg: 2.4 Admin: 2.0 | Air: 2.2 Sub: 2.4 Surface: 2.7 Weapons: 2.0 Other: 2.3 | 1700: 1.7 11xx: 2.5 12xx: 2.3 13xx: 2.2 other: 3.0 | 05: 2.0 06: 2.4 07: 1.7 | Mgt: 2.5 Non Mgt: 2.3 Unk: 2.1 |

To conduct further analysis, each respondent's preparation ratings were summed to form an overall preparation index. Index scores for the sample ranged from a low of 29 (min. possible=17) and a high of 62 (max. possible = 68). This index was used in analyses of variance to determine whether significant overall differences in KSA preparation ratings existed among the various sub-groupings mentioned above. The results are reported in Table 6.

Table 6. Analyses of Variance. Preparation Index by Geographic Region, Base Size, Mission Type, Officer Type, Rank, and Education

| Prep Index by levels of | n | Mean | sd | Source | SS | df | MS | F |
|------------------------------------|----------|-------------|-----------|---|------------------------------|---------------|-----------------|----------|
| Region: | | | | | | | | |
| NE | 5 | 41.40 | 7.50 | <i>between</i> <i>within</i> <i>total</i> | 383.35 2197.94 2581.29 | 4 32 36 | 95.84 68.69 | 1.40 |
| SE | 11 | 43.82 | 7.92 | | | | | |
| NW (incl. AK) | 7 | 42.57 | 7.66 | | | | | |
| SW | 11 | 48.45 | 9.21 | | | | | |
| HI | 3 | 51.67 | 8.50 | | | | | |
| Size: | | | | | | | | |
| Sm. | 7 | 44.57 | 6.08 | <i>between</i> <i>within</i> <i>total</i> | 29.07 2552.22 2581.29 | 3 33 36 | 9.69 77.34 | .1253 |
| Med. | 9 | 44.44 | 9.49 | | | | | |
| Lg. | 19 | 46.11 | 9.34 | | | | | |
| Admin. | 2 | 43.50 | 6.36 | | | | | |
| Mission: | | | | | | | | |
| Air | 13 | 42.23 | 8.02 | <i>between</i> <i>within</i> <i>total</i> | 289.38 2291.91 2581.29 | 4 32 36 | 72.35 71.62 | 1.01 |
| Sub | 5 | 47.00 | 9.79 | | | | | |
| Surface | 7 | 49.14 | 11.5 | | | | | |
| Weapons | 4 | 42.75 | 4.35 | | | | | |
| Other | 8 | 47.00 | 6.39 | | | | | |
| Officer Type: | | | | | | | | |
| 1700 | 3 | 36.33 | 4.62 | <i>between</i> <i>within</i> <i>total</i> | 967.46 1613.84 2581.30 | 4 32 36 | 241.86 50.43 | 4.80** |
| 1110-1140 | 13 | 47.92 | 6.99 | | | | | |
| 1210-1240 | 4 | 47.75 | 7.72 | | | | | |
| 1310-1320 | 14 | 41.50 | 7.56 | | | | | |
| other (eng., LDO) | 3 | 57.00 | 5.57 | | | | | |
| Rank: | | | | | | | | |
| 05 | 2 | 42.00 | 4.24 | <i>between</i> <i>within</i> <i>total</i> | 61.83 2519.47 2581.30 | 2 34 36 | 30.91 74.10 | .4172 |
| 06 | 32 | 45.78 | 8.89 | | | | | |
| 07 | 3 | 42.00 | 5.20 | | | | | |
| Education: | | | | | | | | |
| mgmt degree | 11 | 46.55 | 7.83 | <i>between</i> <i>within</i> <i>total</i> | 116.32 2464.97 2581.29 | 2 34 36 | 58.16 72.50 | .8022 |
| non-mgmt degree | 12 | 46.75 | 8.71 | | | | | |
| unknown | 14 | 43.00 | 8.85 | | | | | |

* $p < .05$ ** $p < .01$

Based on Table 6, we find **no overall differences in preparation ratings** among different geographic regions, base sizes, mission types, or educational backgrounds. However, as Table 6 also shows, officers differed in preparation according to their P codes. *Post hoc* analysis of the significant differences among officer types revealed that self-reported preparation ratings differ between the two groups comprising the 1700 and 13xx (air) communities and the 3 groups comprising other naval communities (generally surface, sub, and engineering). There does not appear to be any overall distinction between warfare and non-warfare officers.

There are other significant differences in specific KSAs as well. They are reported in the next section.

Preparation Ratings in Specific KSAs

Bearing in mind that it is not our intention to isolate any Naval community as more or less prepared and that all officers in our sample indicated that they were less than optimally prepared, the purpose of this section is to explore any factors which may have an impact on an officer's reported level of preparation in specific KSAs. Presumably, the two primary factors are career experience and education. A third factor, base size, was also tested because of varying degrees of complexity associated with managing larger bases (as reported by the COs interviewed).

Base size, education, and P designator were used as independent variables in one-way analyses of variance with each KSA preparation rating as the dependent variable. No significant differences were observed in the analysis of base size. Significant results for education are shown in Table 7.

Table 7. Significant Differences in KSA Preparation Ratings by Education

| KSA by Levels of | n | Mean | sd | Source | df | SS | MS | F | p |
|------------------------------|----------|-------------|-----------|----------------|-----------|-----------|-----------|----------|------------|
| Finance by Education: | | | | | | | | | |
| Mgt. | 11 | 2.45 | .82 | <i>within</i> | 2 | 3.73 | 1.862 | 3.34 | .05 |
| Non-Mgt. | 12 | 2.75 | .75 | <i>between</i> | 34 | 18.98 | .5582 | | |
| Unknown | 14 | 2.00 | .67 | <i>total</i> | 36 | 22.70 | | | |

Table 7. Significant Differences in KSA Preparation Ratings by Education cont.

| KSA by Levels of | n | Mean | sd | Source | df | SS | MS | F | p |
|-----------------------------|----|------|-------|----------------|----|-------|--------|------|------------|
| CIVPER by Education: | | | | | | | | | |
| Mgt. | 11 | 2.45 | .688 | <i>within</i> | 2 | 5.38 | 2.6901 | 3.35 | .04 |
| Non-Mgt. | 12 | 2.83 | .835 | <i>between</i> | 34 | 27.32 | .8036 | | |
| Unknown | 14 | 1.92 | 1.071 | <i>total</i> | 36 | 32.70 | | | |

Note: P code categories in **bold** indicate source of significant differences according to *post hoc* Scheffe test.

As shown in Table 7, education accounts for significant preparation differences in preparation ratings in only two areas: **Finance and Civilian Personnel**. Moreover, these differences are attributable to those whose educational backgrounds are highly specialized (e.g., engineering) rather than in management. This finding is surprising and difficult to account for, especially given the small sample size. We might speculate that the typical advanced management degree is generic, not specific to base management. Also, the higher preparation scores of those with non-management degrees are perhaps more accurately attributable to the officers' operational experience with contracts, project budgets, and civilian contractors. This is supported by the additional finding that the "other" category (consisting of engineering and LDO officers) accounts for the highest preparation scores in **Civilian Personnel, Materiel Management, Contracting, Organizational Redesign, Strategic Planning, and Urban Planning**, as shown in Table 8.

Table 8. Significant Differences in KSA Preparation Ratings by P Codes

| KSA by Levels of | n | Mean | sd | Source | df | SS | MS | F | p |
|--------------------------|----|------|------|----------------|----|-------|--------|------|------------|
| CIVPER by P code: | | | | | | | | | |
| 1700 | 3 | 3.00 | 1.00 | <i>within</i> | 4 | 9.59 | 2.4000 | 3.32 | .02 |
| 11xx | 13 | 2.31 | .85 | <i>between</i> | 32 | 23.11 | .7223 | | |
| 12xx | 4 | 2.75 | 1.25 | <i>total</i> | 36 | 32.70 | | | |
| 13xx | 14 | 1.93 | .73 | | | | | | |
| Other | 3 | 3.67 | .57 | | | | | | |

Table 8. Significant Differences in KSA Preparation Ratings by P Codes cont.

| KSA by Levels of | n | Mean | sd | Source | df | SS | MS | F | p |
|--------------------------------|----------|-------------|-----------|----------------|-----------|-----------|-----------|----------|-------------|
| Materiel Mgt by P code: | | | | | | | | | |
| 1700 | 3 | 1.67 | .577 | <i>within</i> | 4 | 12.62 | 3.1560 | 5.49 | .001 |
| 11xx | 13 | 3.23 | .599 | <i>between</i> | 32 | 18.40 | .5751 | | |
| 12xx | 4 | 3.00 | .817 | <i>total</i> | 36 | 31.02 | | | |
| 13xx | 14 | 2.42 | .938 | | | | | | |
| Other | 3 | 4.00 | .000 | | | | | | |
| Contracting by P code: | | | | | | | | | |
| 1700 | 3 | 2.00 | .000 | <i>within</i> | 4 | 12.00 | 3.0003 | 6.70 | .000 |
| 11xx | 13 | 2.15 | .689 | <i>between</i> | 32 | 14.32 | .4476 | | |
| 12xx | 4 | 2.75 | .957 | <i>total</i> | 36 | 26.32 | | | |
| 13xx | 14 | 1.64 | .633 | | | | | | |
| Other | 3 | 3.67 | .578 | | | | | | |
| Org. Redesign P code: | | | | | | | | | |
| 1700 | 3 | 1.67 | .577 | <i>within</i> | 4 | 8.59 | 2.1480 | 3.06 | .03 |
| 11xx | 13 | 3.08 | .760 | <i>between</i> | 32 | 22.43 | .7011 | | |
| 12xx | 4 | 3.25 | .500 | <i>total</i> | 36 | 31.02 | | | |
| 13xx | 14 | 2.57 | 1.01 | | | | | | |
| Other | 3 | 3.67 | .577 | | | | | | |
| Strategic Plan. P code: | | | | | | | | | |
| 1700 | 3 | 1.67 | .577 | <i>within</i> | 4 | 11.57 | 2.8932 | 4.33 | .006 |
| 11xx | 13 | 3.31 | .855 | <i>between</i> | 32 | 21.40 | .6688 | | |
| 12xx | 4 | 3.25 | .957 | <i>total</i> | 36 | 32.97 | | | |
| 13xx | 14 | 2.64 | .842 | | | | | | |
| Other | 3 | 4.00 | .000 | | | | | | |

Table 8. Significant Differences in KSA Preparation Ratings by P Codes cont

| KSA by Levels of | n | Mean | sd | Source | df | SS | MS | F | p |
|-------------------------------|----|------|------|----------------|----|-------|--------|------|-------------|
| Urban Plan. by P code: | | | | | | | | | |
| 1700 | 3 | 1.33 | .577 | <i>within</i> | 4 | 6.82 | 1.7060 | 3.26 | .023 |
| 11xx | 13 | 2.38 | .768 | <i>between</i> | 32 | 16.74 | .5232 | | |
| 12xx | 4 | 1.50 | .578 | <i>total</i> | 36 | 23.56 | | | |
| 13xx | 14 | 2.00 | .679 | | | | | | |
| Other | 3 | 3.00 | 1.00 | | | | | | |

Note: P code categories in **bold** indicate source of significant differences according to *post hoc* Scheffe test.

As seen in Table 8, not only do engineering officers consistently rate themselves as most prepared in all six of the significant areas, but also their ratings account for the differences in three of those areas: Strategic Planning, Contracting, and Materiel Management. Notably, the low self-reported preparation ratings of the 1700 community also account for differences in the areas of Materiel Management and Strategic Planning. Again, it is difficult to speculate on reasons for these findings because these two sample sub-groups sizes are especially small ($n=3$ and $n=3$) and exhibit comparatively little deviation within the groups.

Unexpected Findings

Survey respondents rated themselves as adequately prepared in Media Relations (mean = 3.00). This finding contradicts the expressed sentiments of the interviewees, who felt they could have been better prepared to deal proactively and strategically with the media and often suggested means for training prospective COs more effectively. However, most of the officers interviewed who discussed the need for better preparation in media relations also described incidences in which they faced adversarial media or inaccurate reporting. It is quite possible that fewer of the COs surveyed had this experience, and so did not find their skills put to the test.

Not surprisingly, survey respondents rated themselves as well prepared in the area of leadership (mean = 3.68). Civilian personnel, on the other hand, was a problem area (mean= 2.38) and indicates a distinction being made between the concepts of military leadership and people management. It is possible that officers responded to the personnel item on the survey as a technical issue, rather than as a "people management" issue relating to leadership. In other words, officers may have focused more on the legal

aspects of hiring and working with civilians versus military personnel. Of interest is the finding that 1700 community respondents rated themselves as least prepared in almost every competency area, with the exception of Civilian Personnel (mean prep rating =3.0). This is an area in which the 1700 community, historically serving in administrative billets, may have extensive operational experience.

We expected to find some preparation advantages among those who had reportedly pursued advanced education and this was so, but only in specific areas such as Finance and Civilian Personnel. Those without advanced degrees saw themselves at a disadvantage in these two competency areas. Close examination reveals further that, as a subgroup, engineering officers rated themselves as best prepared in these areas. Education may in fact have little to do with this finding. From an operational standpoint, these officers deal more frequently and extensively with facilities and materiel, project budgets and civilian contractors, so it is not surprising that they also report the highest preparation scores overall.

The fact that we did not see a distinct advantage for the group with advanced management degrees was initially surprising. Upon further reflection however, we came to understand that the educational backgrounds of our sample offered no significant advantage in terms of preparation for assuming command of a naval installation. In other words, the "generic" management degree or highly specialized engineering degree is insufficient preparation for the demands of installation management.

Additional Research

More research is warranted in the area of officer perceptions of media relations and the high-visibility of the CO's role. The survey respondents rated their preparation quite high, whereas the interviewees indicated substantial concerns about their lack of preparation for dealing with media.

Additional research may more thoroughly document areas where higher ranking-officers are deficient in new technological skills and knowledge, such as computer applications, networking, and distributed work. Also needed is information on the best ways to rectify deficiencies and to keep officers current.

Questions arise concerning the definition of leadership among naval officers. In particular, how does "people management" fit into the scheme of military leadership? Also, how does one's conception of leadership change in transitioning from micro-managed operational environments to macro-level administration?

Finally, the consistently low preparation ratings of the 1700 community are a matter of concern. Our findings support continued efforts to investigate gender and operational training and command issues such as leadership.

Conclusion

We identified 17 core KSAs for installation management. The managerial purview of base commanding officers is broader in scope than that of "warfighting" commanders. Most KSAs reported in this study consists of skills and competencies which pertain almost exclusively to the management of military installations. Among these are finance, civilian personnel issues, urban planning, environmental issues, legal issues, contracting and outsourcing, community relations, and MWR. The warfighting operational experience and training which characterizes the career paths of most commanding officers is inadequate preparation for assuming base command. A comment appended to a survey response is particularly illustrative: ***"As [an officer] with 21 years of commissioned service, I was not fully prepared to deal with the technical aspects of running a [naval base] when I assumed command."***

Moreover, installation commanders feel the Navy is, at best, inattentive to the demands of the job. The extent of "on-the-job" training required of installation COs severely undermines their efficiency and effectiveness, while the scope of their responsibilities is significantly increased relative to that of officers in other command billets. The results reported here show that, regardless of prior experience or educational background, running a naval installation is a unique experience which severely tasks leadership, managerial, and intellectual abilities in new and, oftentimes, unexpected ways.

REFERENCES CITED

Installation Corporate Information Management Group. (1996a). Defining the installation business [Online]. Available: <http://www.acq.osd.mil/inst/icim/busdef.html>

Installation Corporate Information Management Group. (1996b). ICIM history [Online]. Available: <http://www.acq.osd.mil/inst/icim/stratpln/icimhist.html>

APPENDIX

SURVEY OF KNOWLEDGE AND SKILL REQUIREMENTS OF INSTALLATION MANAGEMENT

MANAGING A NAVY SHORE-BASED INSTALLATION

NAME: _____

NAME OF BASE: _____

TYPE OF INSTALLATION (e.g. Sub, Air, Surface): _____

NUMBER OF PERSONNEL ASSIGNED: (mil) _____

DIRECTIONS: Below you will find 16 knowlege and skill areas. Please circle the first set of numbers to indicate how important each area is for effective base management. Circle the second set of numbers to indicate the extent to which you were prepared in the knowledge and skill area prior to assuming command of your first shore-based installation.

| IMPORTANCE | | | | PREPARATION | | | |
|-------------------|-----------|-----------------------|------------------|------------------|----------|----------------------|-----------------|
| Very Important | Important | Somewhat Important | Not Important | Well Prepared | Prepared | Somewhat Prepared | Not Prepared |
| 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |

KNOWLEDGE AND SKILL AREAS:

| | Importance | | | | Preparation | | | |
|--|------------|---|---|---|-------------|---|---|---|
| 1. Financial/Accounting/Budgeting --generating, allocating, and controlling funding to accomplish base objectives. | 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
| 2. Management Information Systems --using computer technology for effective management of information. | 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
| 3. CIVPERS --understanding the processes and legal ramifications of labor negotiations, employee recruitment, training, evaluation, and discipline. | 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
| 4. Environmental Laws -anticipating enviromental issues and complying with enviromental regulations that impact base operations. | 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
| 5. Legal Matters -understanding the laws which facilitate and constrain base management decisions. | 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
| 6. Facilities Management --maintaining the physical plant and its connections with outside governmental entities. | 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
| 7. Material Management --maintaining equipment and monitoring its life-cycle. | 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |

| IMPORTANCE | | | | PREPARATION | | | |
|------------------------|----------------|----------------------------|-----------------------|-----------------------|---------------|---------------------------|----------------------|
| Very Important 4 | Important 3 | Somewhat Important 2 | Not Important 1 | Well Prepared 4 | Prepared 3 | Somewhat Prepared 2 | Not Prepared 1 |

KNOWLEDGE AND SKILL AREAS:

8. **Media Relations**--effectively interacting with the media.

| Importance | | | | Preparation | | | |
|------------|---|---|---|-------------|---|---|---|
| 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |

9. **Community Relations**--building positive relationships with the community at large.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|

10. **Contracting/Outsourcing**--establishing contractual relations with suppliers and reducing infrastructure costs through partnering.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|

11. **Leadership**--using a set of personal skills to work effectively with and through others (e.g. conflict management, communication, motivation, group dynamics).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|

12. **Managing Change**--identifying what needs to be changed and developing a transition plan to achieve it.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|

13. **Organizational Redesign**--rearranging people, tasks, structure, processes, etc. for meeting base objectives.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|

14. **Strategic Planning**--setting organizational direction based on an assessment of the environment, future needs, and the organization's ability to execute its plans.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|

15. **Urban Planning**--optimizing land utilization within the constraints of government regulations.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|

16. **Performance Evaluation**--Using appropriate measures to assess base performance.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|

17. **Other Area? Please Explain.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|

18. **Other Area? Please Explain.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 3 | 2 | 1 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|

Distribution List

| <u>Agency</u> | <u>Number of Copies</u> |
|---|-------------------------|
| Defense Technical Information Center Cameron Station Alexandria, VA 22314 | 2 |
| Dudley Knox Library, Code 52 Naval Postgraduate School Monterey, CA 93943 | 2 |
| Office of Research Administration Code 09 Naval Postgraduate School Monterey, CA 93943 | 1 |
| Honorable Bernard Rostker Assistant Secretary of the Navy (Manpower and Reserve Affairs) Wash D.C. 20350-1000 | 2 |
| Principal Assistant Deputy Undersecretary of Defense OSD(L) The Pentagon, Room 3E813 Wash D.C. 20301-3000 | 2 |
| RADM M. J. Evans Code 00 Naval Postgraduate School Monterey, CA 93943 | 1 |
| David Whipple Code SM/Wp Naval Postgraduate School Monterey, CA 93943 | 1 |
| Commander-in-Chief, United States Pacific Fleet ATTN: Code N46 250 Makalapa Dr. Pearl Harbor, HI 96860-7000 | 2 |
| VADM W. J. Hancock, USN Deputy Chief of Naval Operations (Logistics) (N4) Office of CNO 2000 Navy Pentagon Wash D.C. 20350-2000 | 1 |

| | |
|---|---|
| RADM John Scudi, SC, USN Director of Shore Installation Management Division (N46) Office of CNO 2000 Navy Pentagon Wash D.C. 20350-2000 | 3 |
| RADM John Craine, USN Director, Assessment Division N8 1, OPNAV 2000 Navy Pentagon Wash D.C. 20350-2000 | 1 |
| Commander, Naval Shore Activities US Atlantic Fleet 1562 Mitscher Ave., Ste 300 Norfolk, VA 23551-2480 | 1 |
| Commander, Naval Base Seattle RADM William D. Center II 03 Hunley Road Silverdale, WA 98315 | 1 |
| Asst Chief of Staff for Installation Mgt 600 Army Pentagon ATTN: LTC Fitzgerald Wash D.C. 20310-0600 | 6 |
| HQ USAF/CE 1260 Air Force Pentagon Wash D.C. 20330-1260 | 2 |
| Commander, Naval Air Systems Command Naval Air Systems Command Hqts Headquarters 1421 Jefferson Davis Highway Arlington, VA 22243 | 2 |
| Commander, Naval Sea Systems Command 2341 Jefferson Davis Highway Arlington, VA 22202 | 2 |
| Commander, Naval Supply Systems Command 5450 Carlisle Pike Box 2050 Mechanicsburg, PA 17055-0791 | 2 |
| Commander, Naval Facilities Engineering Command 200 Stovall St. Alexandria, VA 22332-2300 | 2 |

| | |
|---|----|
| Department of Systems Management Library Code SM/Tz Naval Postgraduate School Monterey, CA 93943 | 2 |
| Department of Systems Management Code SM/Pa Naval Postgraduate School Monterey, CA 93943 | 20 |
| Department of Systems Management Code SM/Fa Naval Postgraduate School Monterey, CA 93943 | 10 |